

IN THE CLAIMS:

Please amend the claims as follows.

SPY 1
1. (Currently Amended) A decoding method of decoding multiplexed ~~multiplex~~ data using the Viterbi decoding method, wherein the multiplexed ~~which multiplex~~ data are composed by time division ~~stream in time division~~, the multiplexed data ~~which data streams~~ are coded with ~~by~~ at least a convolution code, and a coding rate and a modulation scheme are set individually for each of the data streams ~~whose coding rates and modulation systems are set respectively~~, the decoding method comprising the steps of:

measuring a ~~the~~ strength of a ~~the~~ noise contained in the multiplexed ~~multiplex~~ data;
checking whether the strength of the noise ~~measured noise strength~~ is equal to or greater than a predetermined value; and

initializing a path metric calculated based on the Viterbi decoding method, at a moment when decoding of one of the data streams is started, if the strength of the noise measured is equal to or greater than the predetermined value.

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when the measured noise strength is equal to or greater than the predetermined value, initializing the path metric calculated based on the Viterbi decoding method at a timing at which the decoding of individual data streams is started

2. (Currently Amended) The decoding method according to claim 1, wherein the path metric is initialized only if a ~~when the coding rate of a second~~ the data stream to be decoded subsequently to a first data stream that has been decoded is larger than a coding rate of the first ~~data stream which has just been decoded, only then the path metric is initialized.~~

3. (Currently Amended) A data receiving system comprising:
a Viterbi decoder which decodes multiplexed ~~multiplex~~ data composed by time division ~~stream in time division~~, the multiplexed data ~~which data streams~~ are coded with ~~by~~ at least a convolution code, a coding rate and a modulation scheme being set individually for each of the data streams ~~and whose coding rates and modulation systems are set respectively~~;

a signal-to-noise ratio monitor which measures a ~~the~~ strength of a ~~the~~ noise included in the multiplexed ~~multiplex~~ data;

a comparison unit which checks whether the strength of the noise ~~measured noise~~

strength is equal to or greater than a predetermined value and outputs a notification signal if ~~when~~ the strength of the noise measured ~~noise strength~~ is equal to or greater than the predetermined value; and

an initialization signal generation unit which outputs an initialization signal ~~which~~ initializes for initializing a the path metric calculated by ~~in~~ said Viterbi decoder, at a moment ~~when timing at which the decoding of one of the individual data streams is started,~~ when the initialization signal generation unit receives ~~when receiving~~ the notification signal.

4. (Currently Amended) The data receiving system according to claim 3, further comprising a signal selection unit which,

receives the initialization signal,

checks whether a coding code rate of a second ~~the~~ data stream to be decoded subsequently to a first data stream that has been decoded is larger than a coding rate of the first data stream ~~which has just been decoded~~, and

provides the initialization signal to said Viterbi decoder only if ~~when~~ the coding code rate of the second data stream ~~to be decoded~~ is larger than the coding rate of the first data stream ~~which has just been decoded~~.

5. (Currently Amended) The data receiving system according to claim 3, further comprising a distribution unit which distributes the multiplexed multiplex data into a plurality of information corresponding respectively to the plurality code streams, after the multiplexed multiplex data are decoded and ~~outputs the distributed data~~.

6. (Currently Amended) The data receiving system according to claim 3, further comprising a multiplexed multiplex information decoding unit which extracts and decodes multiplexed multiplex information from the multiplexed multiplex data ~~so as to decode the multiplex information~~ when the multiplexed information decoding unit receives multiplexed multiplex data has including the multiplexed multiplex information ~~as an added information~~.

7. (Currently Amended) The data receiving system according to claim 3, further comprising a register storing the predetermined value that is variably set in accordance with a signal the register receives.

8. (Currently Amended) The data receiving system according to claim 3, wherein said data stream is of a BPSK, QPSK or 8PSK scheme.

9. (Currently Amended) A decoder comprising:

a Viterbi decoder which decodes multiplexed multiplex data composed by time division multiplexing a plurality of data streams stream in time division, which the multiplexed data streams are coded with by at least a convolution code, a coding rate and a modulation scheme being set individually for each of the data streams and whose coding rates and modulation systems are set respectively;

a signal-to-noise ratio monitor which measures a the strength of a the noise included in the multiplexed multiplex data;

a comparison unit which checks whether the strength of the noise measured noise strength is equal to or greater than a predetermined value and outputs a notification signal if when the strength of the noise measured noise strength is equal to or greater than the predetermined value; and

an initialization signal generation unit which outputs an initialization signal which initializes for initializing, at a moment which decoding of one of the data streams is started, a the path metric calculated by in said Viterbi decoder, at a timing at which the decoding of individual data streams is started when the initialization signal generation unit receives when receiving the notification signal.

10. (Currently Amended) A data transmitting and receiving system comprising:

a transmitting unit which transmits a time division multiplexed multiplexing data including a plurality of data streams stream; and

a receiving unit which receives and decodes the time division multiplexed multiplexing data,

said receiving unit including comprising,

a Viterbi decoder which decodes said time division multiplexed multiplexing data,

a signal-to-noise ratio monitor which detects a the noise in the time division multiplexed multiplexing data; and

an initialization signal generating unit which outputs an a initialization signal to said Viterbi decoder on the basis of the noise detected noise so as to initialize, at a moment when decoding of one of the data streams is started, a the path metric calculated by said Viterbi

decoder ~~at a timing when decoding of each of said plurality of data stream is started.~~

a³ 11. (Currently Amended) A data transmitting and receiving system according to claim 10, wherein the initialization signal is output ~~outputted~~ to said Viterbi decoder only if a ~~when the~~ coding rate of a second ~~the~~ data stream to be decoded subsequently to a first data stream that has been decoded is larger than a coding rate ~~that~~ of the first data stream ~~decoded before~~.
